



ISA² Action

IPv6 Framework for European Governments

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Context

Context

- *The focus on IPv6 dates back from 2000. In 2001, **Commissioner Liikanen** launched the European and subsequently national IPv6 Task Forces, some of which are still informally running.*
- *Two **IPv6 Communications** were tabled with priorities and action plans,*
 - COM(2002)96 - "Next Generation Internet-priorities for action in migrating to the new Internet protocol IPv6"
 - COM(2008)313 - "Advancing the Internet, Action Plan for the deployment of IPv6 in Europe"



Context

- In the **Digital Agenda for Europe** Communication of 2010, the Commission again enjoined Member States to make eGovernment services fully interoperable by supporting IPv6. Deploying IPv6 was a key action under the Digital Agenda for Europe.
- Two **studies** were launched with the objective of monitoring IPv6 take-up. The Commission has introduced a specific indicator - **IPv6 readiness** – in the Digital Agenda Scoreboard. This was directly fed by the **IPv6 Observatory** (www.ipv6observatory.eu) established in the context of the study SMART 2011/0059 on IPv6 Monitoring.



Context

- *More than 100 M€ were invested on IPv6-related projects. Concretely, in the scope of the **Competitiveness and Innovation framework Programme**, the Commission funded a number of Pilots focusing on the deployment of IPv6 in Government, but also in Industry, with the objective of promoting and facilitating the adoption of IPv6. One of them was **GEN6**, aiming at stimulating the deployment of IPv6 by public authorities.*
- *The results of GEN6 were presented in 2015 to the **ISA Programme Committee**, and were very well received.*



IPv6 Framework for European Governments

*The ISA² 2016 Work Programme included Action 2016.09, **IPv6 Framework for European Governments**, aiming at ensuring interoperability between European Administrations and provide advanced eGovernment services to European citizens by sharing best practices and lessons learned and providing a tested transition plan, based on the results of the Competitiveness and Innovation Framework Programme (CIP) project GEN6 (www.gen6-project.eu, 2012-15).*



GEN6 (www.gen6-project.eu)

GEN6 investigated the transition to IPv6 including through several complementary pilots. A number of booklets were published, including

- Government motivation
- Addressing and Transition
- Secure Election-Infrastructures based on IPv6 clouds
- National-Level IPv6 - Addressing Concept for the Government
- Requirement Analysis for eGovernment Services with IPv6
- Stimulating IPv6 Upgrades of Public Network and e-Government Services
- IPv6 Standards and RFCs - What Profiles can do
- IPv6 Implementation - In Existing eGovernment Infrastructures



IPv6 Framework for European Governments

The action is currently being implemented by DG CONNECT as a study SMART 2016/0099, running until November 2018 (www.ipv6gov.eu), which is expected to deliver

- **Status of IPv6 deployment in public administrations** in Europe;
- Discussion of **Best Practices and Lessons Learned** from member states in advanced stages of deployment, namely Germany and Spain, in a number of workshops in the next months;
- **Guidelines** to set up IPv6 in public administrations, starting with an Addressing Plan and a dedicated Local Internet Registry;
- **Training material** for public administrations on the transition to IPv6, building upon identified Best Practices and above Guidelines;
- **Tailored recommendations for (the planning of) the transition towards IPv6**, taking into consideration specific national circumstances.



Back to Context

- *More recently, IPv6 was specifically identified in the Cybersecurity package, and namely in the Communication on Resilience, Deterrence and Defence: Building strong cybersecurity for the EU, JOIN(2017)450, as bringing clear benefits to cybersecurity.*



Why IPv6 and why now?

- *IPv6 has a critical role in securing the success of advanced wireless services like 5G, addressed in the 5G Action Plan, and of advanced broadband services.*
- *It is a critical enabler of the Internet of Things and of Industry 4.0, of Connected Autonomous Vehicles and of advanced public services in general.*
- *Moreover, IPv6 was specifically identified in the Cybersecurity package as bringing clear benefits in terms of cybersecurity.*
- *We the need to act now! The longer we wait, the more it will cost us, both in terms of lost innovation and actual losses from cyber-crime and cyber-attacks.*



Why IPv6 and why now?

- *The Commission will mainstream the requirement to move to IPv6 throughout its policies, including procurement;*
- *Member States are invited to actively promote the take up of IPv6 through tested, structured transition, namely at Public Administration level, building upon the lessons learned and the best practices of pioneer Member States, and*
- *Internet Service Providers are expected, if they haven't done so yet, to offer IPv6 as a basic service.*



First Workshop – Identifying Barriers

Identifying barriers to IPv6 deployment and discussing possible solutions based upon lessons learned from first-mover Member States

- *Validating the results of the recent assessment of IPv6 in the Member States*
- *Presentations from early adopter Member States on their success stories (DE, ES, BE, NL)*
 - **Interactive session on Status of IPv6 implementation, discussing the process of transition, as well as barriers and needs**
 - **Matching up barriers with potential solutions and trying to come up with concrete recommendations**
- *First conclusions on the status of IPv6 deployment*



Second Workshop – Addressing Barriers

Discussing the barriers to IPv6 deployment and potential solutions taking into consideration national circumstances

First recommendations towards accelerating the deployment of IPv6





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next MFF...

Addressing the needs of Public Administrations

A BUDGET ALIGNED TO POLITICAL PRIORITIES

In billion euro, current prices

I. SINGLE MARKET, INNOVATION AND DIGITAL €187.4

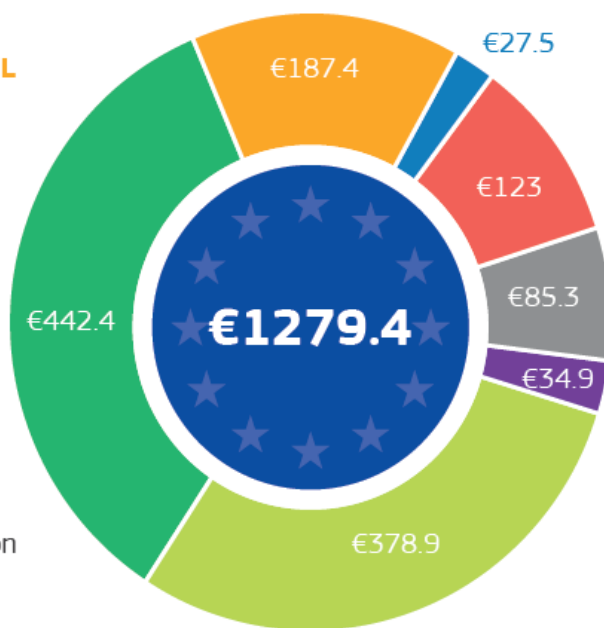
- 1 Research and Innovation
- 2 European Strategic Investments
- 3 Single Market
- 4 Space

II. COHESION AND VALUES €442.4

- 5 Regional Development and Cohesion
- 6 Economic and Monetary Union
- 7 Investing in People, Social Cohesion and Values

III. NATURAL RESOURCES AND ENVIRONMENT €378.9

- 8 Agriculture and Maritime Policy
- 9 Environment and Climate Action



V. SECURITY AND DEFENCE €27.5

- 12 Security
- 13 Defence
- 14 Crisis Response

VI. NEIGHBOURHOOD AND THE WORLD €123

- 15 External Action
- 16 Pre-Accession Assistance

IV. MIGRATION AND BORDER MANAGEMENT €34.9

- 10 Migration
- 11 Border Management

VII. EUROPEAN PUBLIC ADMINISTRATION €85.3

- 17 European Public Administration



Digital transformation of public administrations

The objective is to reduce administrative burden on businesses and citizens by making their interactions with public administrations faster, efficient, more convenient and transparent through:

- implementation of the **once-only-principle**;
- deployment of building block and interoperability solutions
- **development and use of common specifications and standards**
- support the deployment at local and regional level of a coherent **ecosystem of digital services** (including end-to-end services);
- deployment of **cross border digital services**
- **adoption of digital technologies** such as HPC, AI, cybersecurity and blockchain;
- use of **data analytics tools** for the analysis of public and private sector data for public interest purposes
- Providing access to **Digital Innovation Hubs** supporting projects in implementing new technologies



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IPv6 for Public Administrations - Final Workshop

Brussels, 11 October 2018

Objectives of this Workshop

- *Starting with the conclusions from the first Workshop, ...*

propose a flexible methodology for the transition to IPv6, addressing the barriers identified thus far, and...

present a number of recommendations validated in previous workshops

- *Get feedback from the participants*



Agenda[09:30 – 17:30]

- *Opening remarks - DG CONNECT*
- *Project overview*
- *The current state of IPv6 deployment in Europe and in Public Administrations in particular*
- *Barriers to IPv6 deployment in Public Administrations*
- *Addressing the barriers to IPv6 deployment – Lessons learned and successful case studies*
- *Project deliverables and resources for Public Administrations*
- *Lessons Learned and Recommendations*
- ***OPEN DISCUSSION***
- *Closing Remarks - DG CONNECT*





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Looking forward to very fruitful discussions!

IPv6 for Public Administrations - Final Workshop